

## ABSTRACT OF THE DISCLOSURE

A buffer-management technique efficiently manages a set of data buffers accessible to first and second devices interconnected by a split transaction bus, such as a Hyper-Transport (HPT) bus. To that end, a buffer manager controls access to a set of “free”  
5 buffer descriptors, each free buffer descriptor referencing a corresponding buffer in the set of data buffers. Advantageously, the buffer manager ensures that the first and second devices are allocated a sufficient number of free buffer descriptors for use in a HPT data path protocol in which the first and second devices have access to respective sets of free buffer descriptors. Because buffer management over the HPT bus is optimized by the  
10 buffer manager, the amount of processing bandwidth traditionally consumed managing descriptors can be reduced.